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Study of intramolecular dynamics of polyetherimides: FTIR absorption spectra and their interpretation with new mathematical methods

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Abstract

The internal rotation of fragments of polyetherimides' macromolecules has been studied by FTIR spectroscopy. The estimation, based on an analysis of absorption bands, of local mobility of CH 3 and CF 3 groups in the polymers was carried out. General principles of processing of spectroscopic experiment data have been considered and some algorithms able to suppress noise, to resolve fine structure and to identify latent components in overlapped bands have been proposed.

Keywords

FTIR absorption spectra, Polyetherimides